

I claim:

1. A method for adjusting engine operation of a vehicle having a humidity sensor, the method comprising:

determining a parameter indicative of ambient humidity

5 outside of the vehicle based on said sensor;

determining a desired cylinder valve condition based at least on said parameter; and

adjusting a control signal to adjust said cylinder valve based on said desired cylinder valve condition.

10

2. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder valve lift.

15 3. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve lift.

4. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve lift.

20 5. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder valve timing.

6. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve timing.

7. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve timing.

8. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder cam timing.

9. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake valve cam timing.

10 10. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder exhaust valve cam timing.

11. The method of claim 1 wherein said desired cylinder valve condition is a desired cylinder intake and exhaust valve 15 cam timing.

12. A method for adjusting engine operation of a vehicle having a humidity sensor, the method comprising:

determining a parameter indicative of ambient humidity 20 outside of the vehicle based on said sensor;  
determining a desired cylinder cam timing based at least on said parameter and an engine operating condition; and  
adjusting a control signal to adjust said cylinder valve based on said desired cylinder cam timing.

13. The method recited in claim 12 wherein said parameter  
is absolute humidity.

14. The method recited in claim 12 wherein said  
5 parameter is relative humidity.

15. The method recited in claim 12 further comprising  
determining degradation of said humidity sensor based on a  
measured signal.

10

16. The method recited in claim 15 further comprises  
setting said desired cam timing to a nominal value if said  
humidity sensor has degraded.

15 17. An article of manufacture having a computer readable  
storage medium with a computer program encoded therein for  
adjusting engine operation of a vehicle having a humidity  
sensor, the article comprising:

code for determining a parameter indicative of ambient  
20 humidity outside of the vehicle based on said sensor;  
code for determining a desired cylinder cam timing based at  
least on said parameter and an engine operating condition; and  
code for adjusting a control signal to adjust said cylinder  
valve based on said desired cylinder cam timing.